

The Chinese Challenge to Hitachi's NdFeB Patents and the Potential Implications for the U.S. Marketplace

by

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“The First Shot”

Tokyo, Japan, August 20, 2012 – “Hitachi Metals, Ltd. (TOKYO) announced today that on August 17, 2012, it filed a formal complaint with the United States International Trade Commission (ITC) against 29 manufacturers and importers of sintered rare earth magnets and products containing sintered rare earth magnets. Hitachi Metals seeks exclusion orders from the ITC prohibiting the entry into the United States of unlicensed, infringing sintered rare earth magnets and products containing those magnets and cease and desist orders prohibiting certain activity within the United States.”

“The Apparent Resolution”

June, 2013 – A few weeks prior to a June 2013 trial date, Hitachi announces that settlement agreements had been reached with nearly all the remaining companies and withdrew their petition to the ITC.

July, 2013 - Hitachi emerges as a “winner” as they issued an announcement regarding their list of new licensees.

Hitachi Licensees

Hitachi Metals - December 2, 2013

- Neorem Magnets Oy
- Vacuumschmelze GmbH & Co. KG
- **Advanced Technology & Materials Co., Ltd.**
- **Anhui Earth-Panda Advance Magnetic Material Co., Ltd.**
- **Beijing Jingci Magnet Co.**
- **Beijing Zhong Ke San Huan High-Tech Co., Ltd.**
- **Ningbo Jinji Strong Magnetic Material Co., Ltd.**
- **Ningbo Yunsheng Co., Ltd.**
- **Thinova Magnet Co., Ltd.**
- **Yantai Zhenghai Magnetic Material Co., Ltd.**
- The Morgan Crucible Company plc
- Shin-Etsu Chemical Co., Ltd.
- TDK Corporation
- Magnetfabrik Schramberg GmbH

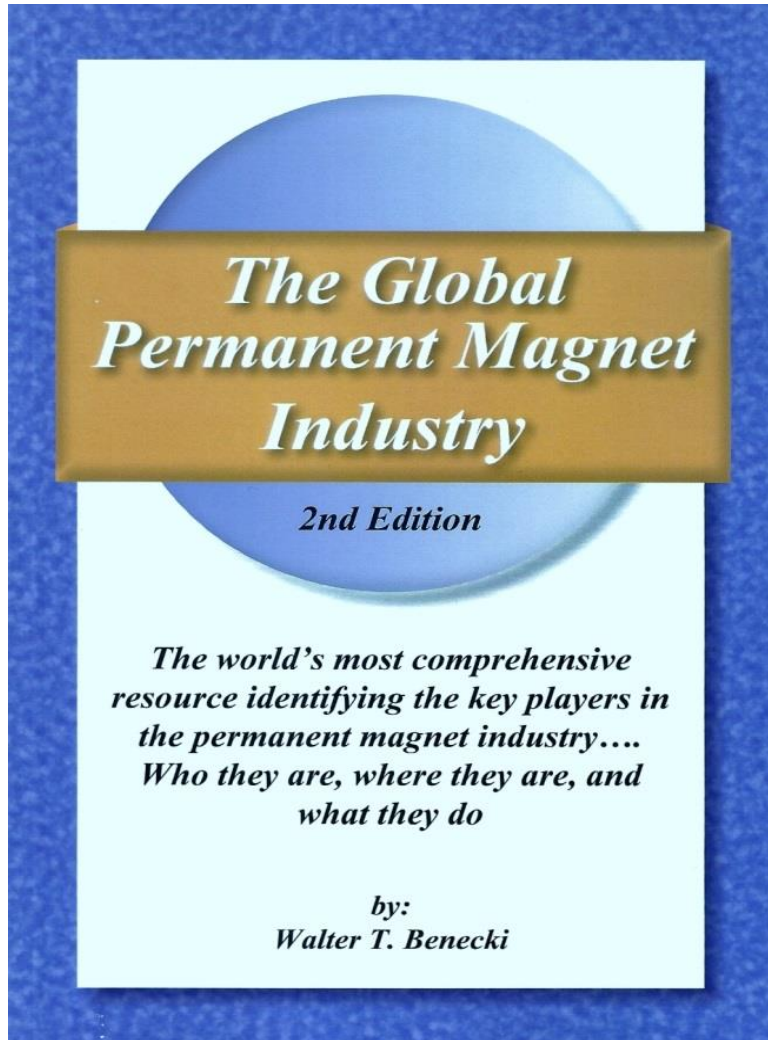
Hitachi is Certainly the “Big Dog” in NdFeB Magnet Technology

- **Hitachi Metals is the recognized worldwide leader in the field of sintered NdFeB magnets.**
- **Hitachi Metals owns over 600 sintered rare earth magnet patents worldwide, including over 100 patents in the United States alone.**
- **Currently 14 Licensees Worldwide**

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China Dominates NdFeB Today



- At Least 70% of Total Global **Production** with 300+ Producers
- Massive Overcapacity – Operating at Less than 60% of Total Capacity
- Over 100 Players in Ningbo Area Alone
- 50+ *Fully Capable* NdFeB Manufacturers Today

August 8, 2013

- *August 8, 2013, The China Daily:* “A dozen Chinese rare earth companies have formed **an industrial alliance to sue Japan’s Hitachi Metals** for holding invalid patents and infringing patent rights of Chinese companies.... Gao Yunhu, chief of the Rare Earth Office under the Ministry of Industry and Information Technology, **said the government will provide assistance** to the Chinese companies if asked.... So far, each member company of the alliance has paid **US\$1.5 million to cover possible** costs of the lawsuits.”

Today's Alliance

- **Ningbo Tongchuang Strong Magnet Material Co., Ltd.**
- **Shenyang General Magnetic Co., Ltd.**
- **Hangzhou Permanent Magnet Group**
- **Ningbo Permanent Magnetics Co., Ltd.**
- **Ningbo Ketian Magnet Co., Ltd.**
- **Ningbo Huahui Magnet Co., Ltd.**
- **Jiangmen Magsource New Material Co., Ltd.**

Alliance Objectives

- **“Joint Funding and Joint Research & Development”**
- **“Joint Funding for Intellectual Property Rights Regarding Rare Earth (NdFeB)Permanent Magnets”**
- **“Joint Safeguard for a Healthy and Orderly Development of the Rare Earth Permanent Magnet Industry”**

The Current Issue

- The Chinese believe that they are *not violating* any current (**valid**) Hitachi patents for their production of NdFeB magnets.
- The Chinese believe that substantial prior art exists to support their position.
- The Chinese feel that Hitachi is unfairly restricting their ability to sell NdFeB magnets world-wide.

The Current Challenges

- **Petition for Inter Partes review of Patent 6,491,765**
filed with USPTO *August 11, 2014*
- **Petition for Inter Partes review of Patent 6,537,385**
filed with USPTO *August 11, 2014*
- **Request for Ex Parte reexamination of Patent 5,858,123**
filed with USPTO *September 2, 2014*
- **Ex Parte reexamination of Patent 5,858,123** granted by
USPTO *October 31, 2014*

The Current Status

- **This patent contest has been underway for over one year.**
- **The ex parte re-exam is a relatively fast track process and could produce a determination during 2015.**
- **There is no indication that the parties are near a mutually agreeable settlement.**
- **Therefore the contest and legal battle will likely continue.**
- **It is unclear who will prevail.**

Three Possible Outcomes



#1 Hitachi Win

#2 Chinese Win

#3 Split Decision

If Hitachi Wins

Winners

- Hitachi
- Hitachi licensees
- Lawyers

Losers

- Chinese alliance
- Other unlicensed Chinese producers
- Magnet users

If the Chinese Win

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- Chinese alliance
- Other Chinese NdFeB producers
- Licensed NdFeB users
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Long Term Impact of a Chinese Consortium “Win”

- **NdFeB prices will likely adjust downward 10-15%**
- **Magnet users will have more sourcing options**

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- NdFeB prices will likely adjust downward 10-15%
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- **But:** Current Hitachi Licensees will likely continue to maintain a significant market share (70-80%)

We Could See a “Split Decision”

Premium Grades

(35+ MGOe)

- Certain Hitachi Patents may well prevail
- Potentially a “win” area for Hitachi and their licensees

Lower Grades

(Less than 35 MGOe)

- Some Hitachi patents may be invalidated by “Prior Art”
- Hitachi may dismiss this category as “Inferior Magnets”

The Potential Battleground

(35-50 MGOe)

- A popular range because of cost, performance and availability
- Questions abound regarding prior and alternate art
- This will likely be the “battleground” for the technical experts to address
- Bottom line – “*Who Knows?*”

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- **Similar contests in the past have taken up to 5-6 years to resolve**
 - **This is far more complex**
 - **And so much is at stake**
 - **5 years may be “Quick”!**

The Guaranteed Winners

The Guaranteed Winners

- **The Lawyers!**

Questions...

Thank You!